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AU9060159

(12) PATENT ABRIDGMENT (11) Document No. AU-B-60159/90  
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 646637

- (54) Title  
VEHICLE SYSTEMS FOR USE IN COSMETIC COMPOSITIONS
- International Patent Classification(s)  
(51)<sup>5</sup> A61K 007/075 A61K 007/06 A61K 007/08
- (21) Application No. : 60159/90 (22) Application Date : 06.08.90
- (30) Priority Data
- | (31) Number | (32) Date | (33) Country                |
|-------------|-----------|-----------------------------|
| 390330      | 07.08.89  | US UNITED STATES OF AMERICA |
| 417289      | 01.05.90  | US UNITED STATES OF AMERICA |
| 551120      | 16.07.90  | US UNITED STATES OF AMERICA |
- (43) Publication Date : 07.02.91
- (44) Publication Date of Accepted Application : 03.03.94
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- (56) Prior Art Documents  
US 4683004

- (57) The present invention relates to novel vehicle systems, and cosmetic compositions formulated therewith, based on particular nonionic long chain alkylated water-soluble polymer derivatives and water-insoluble surfactants at certain critical levels, dispersed in a compatible solvent. A particularly useful application of the present invention is in hair care compositions, especially rinse-off hair conditioning compositions.

#### CLAIM

1. A cosmetic composition comprising:
  - (a) from 80% to 100% of a vehicle system which comprises:
    - (A) from 0.1% to 10.0% by weight of the cosmetic composition of a hydrophobically modified nonionic water-soluble polymer which comprises a water-soluble polymer backbone and hydrophobic groups selected from the group consisting of C<sub>8</sub>-C<sub>22</sub> alkyl, aryl alkyl, alkyl aryl groups and mixtures thereof; wherein the ratio of the hydrophilic portion to the hydrophobic portion of the polymer is from 10:1 to 1000:1; and

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- (B) from 0.02% to 10.0% by weight of the cosmetic composition of a water-insoluble surfactant having a molecular weight less than about 20,000; and
  - (C) from 65% to 99% by weight of the cosmetic composition of a compatible solvent; and
  - (b) from 0% to about 20% of an active cosmetic component; <sup>7</sup>
- wherein said cosmetic compositions comprise no more than about 1.0% of water-soluble surfactants.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A cosmetic composition comprising:
  - (a) from 80% to 100% of a vehicle system which comprises:
    - (A) from 0.1% to 10.0% by weight of the cosmetic composition of a hydrophobically modified nonionic water-soluble polymer which comprises a water-soluble polymer backbone and hydrophobic groups selected from the group consisting of  $C_8-C_{22}$  alkyl, aryl alkyl, alkyl aryl groups and mixtures thereof; wherein the ratio of the hydrophilic portion to the hydrophobic portion of the polymer is from 10:1 to 1000:1; and
    - (B) from 0.02% to 10.0% by weight of the cosmetic composition of a water-insoluble surfactant having a molecular weight less than about 20,000; and
    - (C) from 65% to 99% by weight of the cosmetic composition of a compatible solvent; and
  - (b) from 0% to about 20% of an active cosmetic component;wherein said cosmetic compositions comprise no more than about 1.0% of water-soluble surfactants.
2. The composition of Claim 1 wherein said hydrophobically modified nonionic water-soluble polymer comprises a nonionic cellulose ether having a sufficient degree of nonionic substitution, selected from the group consisting of methyl, hydroxyethyl, and hydroxypropyl, to cause it to be water-soluble and being further substituted with a long chain alkyl radical having 10 to 24 carbon atoms in an amount between about 0.2 weight percent and the amount which renders said cellulose ether less than 1% by weight soluble in water.
3. The composition of Claim 2 wherein the vehicle system provides a rheology to the cosmetic composition that is characterized by a shear stress of from 0 to about 50 pascal over a shear rate range of from 0.04  $\text{sec}^{-1}$  to 25  $\text{sec}^{-1}$ .
4. The composition of Claim 3 wherein the nonionic cellulose ether comprises from 0.2% to 5.0% of the cosmetic composition.

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5. The composition of Claim 4 wherein the nonionic cellulose ether comprises the long-chain alkyl radical attached via an ether linkage.

6. The composition of Claim 5 wherein the nonionic cellulose ether comprises a water-soluble hydroxypropyl cellulose substituted with a long-chain alkyl radical having 10 to 24 carbon atoms in an amount between about 0.2 weight percent and the amount which renders the hydroxypropyl cellulose less than 1% by weight soluble in water.

7. The composition of Claim 6 wherein the nonionic cellulose ether comprises a water-soluble hydroxyethyl cellulose substituted with a long-chain alkyl radical having 10 to 24 carbon atoms in an amount between about 0.2 weight percent and the amount which renders the hydroxyethyl cellulose less than 1% by weight soluble in water.

8. The composition of Claim 7 wherein the hydroxyethyl cellulose prior to substitution with the long chain alkyl group has a molecular weight of 50,000 to 700,000.

9. The composition of Claim 8 wherein the water-soluble hydroxyethyl cellulose is substituted with a long chain alkyl radical having about 16 carbon atoms in an amount between 0.40% to 0.95%, by weight; the hydroxyethyl molar substitution is from 2.3 to 3.7; and the average molecular weight of the unsubstituted cellulose is from 300,000 to 700,000.

10. The composition of Claim 3 which comprises from 0.05% to 3.0% of the water-insoluble surfactant.

11. The composition of Claim 10 wherein the water-insoluble surfactant is selected from the group consisting of stearamide DEA, cocamide MEA, dimethyl stearamine oxide, glyceryl monooleate, sucrose stearate, PEG-2 stearamine, Ceteth-2, glycerol stearate

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citrate, dihydrogenated tallow dimethyl ammonium chloride, Poloxamer 181, hydrogenated tallow dimethyl betaine, hydrogenated tallow amide DEA, and mixtures thereof.

12. The composition of Claim 3 which additionally comprises from 0.3% to 5.0% of a water-soluble polymeric material having a molecular weight greater than about 20,000.

13. The composition of Claim 12 wherein the water-soluble polymeric material is selected from the group consisting of hydroxyethyl cellulose, hydroxypropyl cellulose, hydroxypropyl methyl cellulose, polyethylene glycol, polyacrylamide, polyacrylic acid, polyvinyl alcohol, polyvinyl pyrrolidone, dextran, carboxymethylcellulose, acacia plant exudate, ghatti plant exudate, tragacanth plant exudate, sodium alginate, propylene glycol alginate, sodium carrageenan, natural polysaccharides, and mixtures thereof.

14. The composition of Claim 13 wherein the water-soluble polymeric material comprises a natural polysaccharide.

15. The composition of Claim 14 wherein the natural polysaccharide is selected from the group consisting of guar gum, locust bean gum, xanthan gum, and mixtures thereof.

16. The composition of Claim 3 which additionally comprises from 0.05% to 1.0%, by weight of the composition of a chelating agent.

17. The composition of Claim 16 wherein the chelating agent is selected from the group consisting of ethylene diamine tetracetic acid and salts thereof, nitrilo acetic acid and salts thereof, hydroxyethylene diamine triacetic acid and salts thereof, diethylene triamine penta-acetic acid and salts thereof, diethanol glycine and salts thereof, ethanol diglycine and salts thereof, citric acid and salts thereof, phosphoric acid and salts thereof.

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18. The composition of Claim 12 which additionally comprises from 0.05% to 3%, by weight of the composition, of a chelating agent.

19. The composition of Claim 18 wherein the chelating agent is selected from the group consisting of ethylene diamine tetracetic acid and salts thereof, nitrilo acetic acid and salts thereof, hydroxyethylene diamine triacetic acid and salts thereof, diethylene triamine penta-acetic acid and salts thereof, diethanol glycine and salts thereof, ethanol diglycine and salts thereof, citric acid and salts thereof, and phosphoric acid and salts thereof.

20. The composition of Claim 12 wherein from 0.02% to about 2.5% of the water-soluble polymer is selected from the group consisting of water-soluble polymeric materials having a molecular weight greater than about 1,000,000, and water-soluble polymeric materials having strong ionic character.

21. The composition of Claim 16 wherein from 0.02% to 2.5% of the water-soluble polymer is selected from the group consisting of water-soluble polymeric materials having a molecular weight greater than about 1,000,000, and water-soluble polymeric materials having strong ionic character.

22. The composition of Claim 18 wherein from 0.02% to 2.5% of the water-soluble polymer is selected from the group consisting of water-soluble polymeric materials having a molecular weight greater than about 1,000,000, and water-soluble polymeric materials having strong ionic character.

23. The cosmetic composition of Claim 3 which is a hair care composition wherein said active cosmetic component comprises an active hair care component.

24. The composition of Claim 23 wherein the composition comprises no more than about 1% of fatty alcohol materials.

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25. The composition of Claim 24 wherein the active hair care component is selected from the group consisting of conditioning agents, antidandruff aids, hair growth promoters, perfumes, dyes, pigments, hair holding polymers, and mixtures thereof.

26. The composition of Claim 25 wherein the active hair care component is selected from the group consisting of a volatile silicone fluid having a viscosity of less than about 10 centipoise; a non-volatile silicone fluid having a viscosity of less than about 100,000 CP; a silicone gum having a viscosity greater than about 1,000,000 CP; and mixtures thereof.

27. The composition of Claim 26 wherein the silicone gum is selected from the group consisting of polydimethylsiloxane gums and polyphenylmethylsiloxane gums.

28. The composition of Claim 25 wherein the active hair care component comprises from 0.01% to 10% of a rigid silicone polymer having a complex viscosity of at least  $2 \times 10^3$  poise.

29. The composition of Claim 28 which additionally comprises a volatile carrier for the rigid silicone polymer.

30. A hair care composition according to Claim 29 wherein the rigid silicone polymer is selected from the group consisting of organic substituted siloxane gums, <sup>organic substituted</sup> silicone elastomers, filler reinforced polydimethyl siloxane gums, resin reinforced siloxanes and crosslinked siloxane polymers.

31. A hair care composition according to Claim 30 wherein the volatile carrier is a cyclic silicone containing from 3 to 7 silicon atoms.

32. A hair care composition according to Claim 31 wherein the rigid silicone polymer is <sup>an organic substituted silicone</sup> ~~a~~ silicone elastomer and the sole volatile carrier is water.

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33. A hair care composition according to Claim 31 wherein the rigid silicone polymer is a filler reinforced polydimethyl siloxane gum.

34. A hair care composition according to Claim 31 wherein the rigid silicone polymer is an organic substituted siloxane gum.

35. A hair care composition according to Claim 31 wherein the rigid silicone polymer is a resin reinforced siloxane.

36. The composition of Claim 25 wherein the active hair care component comprises from 0.1% to 10.0% of a copolymer which has a vinyl polymeric backbone having grafted to it monovalent siloxane polymeric moieties, said copolymer comprising C monomers and components selected from the group consisting of A monomers, B monomers, and mixtures thereof, wherein:

A is at least one free radically polymerizable vinyl monomer, the amount by weight of A monomer, when used, being up to about 98% by weight of the total weight of all monomers in said copolymer;

B is at least one reinforcing monomer copolymerizable with A, the amount by weight of B monomer, when used, being up to about 98% of the total weight of all monomers in said copolymer, said B monomer being selected from the group consisting of polar monomers and macromers; and

C is a polymeric monomer having a molecular weight of from 1,000 to 50,000 and the general formula

$X(Y)_nSi(R)_3-m(Z)_m$  wherein

X is a vinyl group copolymerizable with the A and B monomers

Y is a divalent linking group

R is a hydrogen, lower alkyl, aryl or alkoxy

Z is a monovalent siloxane polymeric moiety having a number average molecular weight of at least about 500, is essentially unreactive under copolymerization conditions, and is pendant from said vinyl polymeric backbone after polymerization

n is 0 or 1

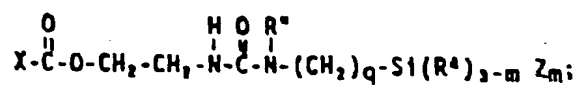
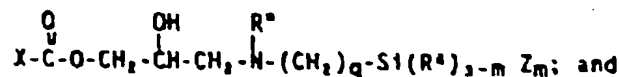
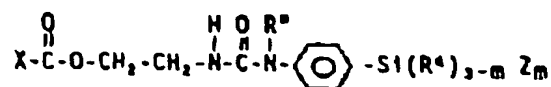
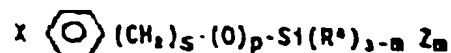
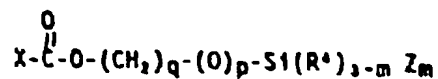
m is an integer from 1 to 3

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wherein C comprises from 0.01% to 50% of the copolymer.

37. The composition of Claim 36 wherein the copolymer comprises from 5% to 98% A monomer, from 0.1% to 50% C monomer, and from 0% to 98% B monomer.

38. The composition of Claim 25 wherein the active hair treatment component comprises a lipophilic low polarity free radically polymerizable vinyl monomer (A), a hydrophilic polar monomer which is copolymerizable with A (B), and a silicone-containing macromer having a weight average molecular weight of from 1,000 to 50,000 based on polydimethylsiloxane selected from the group consisting of



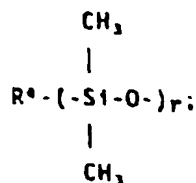
wherein m is 1, 2 or 3; p is 0 or 1; R<sup>1</sup> is alkyl or hydrogen; q is an integer from 2 to 6; s is an integer from 0 to 2; X is



R<sup>1</sup> is hydrogen or -COOH; R<sup>2</sup> is hydrogen, methyl or -CH<sub>2</sub>COOH; Z is



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R<sup>4</sup> is alkyl, alkoxy, alkylamino, aryl, or hydroxyl; and r is an integer from 5 to 700.

39. A hair care composition according to Claim 38 wherein monomer A is selected from the group consisting of acrylic acid esters of C<sub>1</sub>-C<sub>18</sub> alcohols, methacrylic acid esters of C<sub>1</sub>-C<sub>18</sub> alcohols, styrene, vinyl acetate, vinyl chloride, vinylidene chloride, acrylonitrile, alpha-methylstyrene, t-butylstyrene, butadiene, cyclohexadiene, ethylene, propylene, vinyl toluene, ~~polystyrene-monomer~~, and mixtures thereof.

40. A hair care composition according to Claim 39 wherein monomer B is selected from the group consisting of acrylic acid, methacrylic acid, N,N-dimethylacrylamide, dimethylaminoethyl methacrylate, quaternized dimethylaminoethyl methacrylate, methacrylonitrile, methacryloamide, maleic anhydride, half esters of maleic anhydride, itaconic acid, acrylamide, acrylate alcohols, hydroxyethyl methacrylate, diallyldimethyl ammonium chloride, vinyl pyrrolidone, vinyl ethers, maleimides, vinyl pyridine, vinyl imidazole, styrene sulfonate, ~~polystyrene-monomer~~, and mixtures thereof.

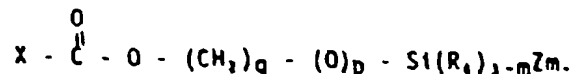
41. A hair care composition according to Claim 40 wherein monomer A is selected from the group consisting of n-butylmethacrylate, isobutylmethacrylate, 2-ethylhexyl methacrylate, t-butylacrylate, t-butylmethacrylate, methylmethacrylate, and mixtures thereof.

42. A hair care composition according to Claim 41 wherein monomer B is selected from the group consisting of acrylic acid, N,N-dimethylacrylamide, dimethylaminoethyl methacrylate, quaternized dimethylaminoethyl methacrylate, vinyl pyrrolidone, and mixtures thereof.



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43. A hair care composition according to Claim 42 wherein monomer C has the formula



44. A hair care composition according to Claim 43 wherein p = 0 and q = 3.

45. A hair care composition according to Claim 44, wherein m is 1, r is about 250, R<sup>4</sup> is alkyl, R<sup>1</sup> is hydrogen, and R<sup>2</sup> is methyl.

46. A hair care composition according to Claim 40 wherein the silicone-containing copolymer is selected from the group consisting of

acrylic acid/n-butylmethacrylate/polydimethylsiloxane macromer - 20,000 mw (10/70/20);

N,N-dimethylacrylamide/isobutyl methacrylate/PDMS macromer - 20,000 mw (20/60/20);

dimethylaminoethyl methacrylate/isobutyl methacrylate/2-ethylhexyl methacrylate/PDMS - 20,000 mw (25/40/15/20);

dimethylaminoethyl methacrylate/isobutyl methacrylate/PDMS - 20,000 mw (10/70/20);

quaternized dimethylaminoethyl methacrylate/isobutyl methacrylate/PDMS - 20,000 mw (40/40/20);

acrylic acid/methyl methacrylate/PDMS - 20,000 mw (40/40/20);

acrylic acid/isopropyl methacrylate/PDMS - 20,000 mw (25/65/10);

N,N-dimethylacrylamide/methoxyethyl methacrylate/PDMS - 20,000 mw (60/25/15);

dimethylacrylamide/PDMS macromer - 20,000 mw (80/20);

t-butylacrylate/t-butylmethacrylate/PDMS macromer - 10,000 mw (56/24/20);

t-butylacrylate/PDMS macromer - 10,000 mw (80/20);

t-butylacrylate/N,N-dimethylacrylamide/PDMS macromer - 10,000 mw (70/10/20);

t-butylacrylate/acrylic acid/PDMS macromer - 10,000 mw (75/5/20);

and mixtures thereof.

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47. A hair care composition comprising:

(a) from 80% to 99.9% of a vehicle system which comprises:

(A) from 0.2% to 5.0%, by weight of the hair care composition, of a nonionic cellulose ether having a hydroxyethyl molar substitution of from 2.3% to 3.7%, and being further substituted with a C<sub>14</sub> alkyl group at from 0.40% to 0.95%, by weight, wherein the unsubstituted hydroxyethyl cellulose has an average molecular weight of from 300,000 to 700,000;

(B) from 0.05% to 3.0%, by weight of the hair care composition, of a water-insoluble surfactant, having a molecular weight less than about 20,000, which is selected from the group consisting of stearamide DEA, cocamide MEA, dimethyl stearamine oxide, glyceryl monooleate, sucrose stearate, PEG-2 stearamine, Ceteth-2, glycerol stearate citrate, dihydrogenated tallow dimethyl ammonium chloride, Poloxamer 181, hydrogenated tallow dimethyl betaine, hydrogenated tallow amide DEA, and mixtures thereof;

(C) from 0.05% to 0.3% of a chelating agent which is selected from the group consisting of ethylene diamine tetra acetic acid and salts thereof, citric acid and salts thereof, and phosphoric acid and salts thereof;

(D) from 0.05% to 1.0% of a distributing aid which is selected from the group consisting of xanthan gum and dextran having a molecular weight greater than about 1,000,000; and

(E) from 65% to 99%, by weight of the hair care composition, of a compatible solvent; and

(b) from 0.1% to 20% of an active hair care component;

wherein said hair care composition comprises no more than about 0.5% of water-soluble surfactants; no more than about 1% of fatty alcohol materials; and wherein said hair care composition has a rheology that is characterized by a shear stress of from 0 to

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about 50 pascal over a shear rate range of from 0.04 sec<sup>-1</sup> to 25 sec<sup>-1</sup>.

48. The composition of claim 44 wherein the active hair care component comprises a silicone-containing copolymer selected from the group consisting of

- acrylic acid/n-butylmethacrylate/polydimethylsiloxane macromer - 20,000 mw (10/70/20);
- N,N-dimethylacrylamide/isobutyl methacrylate/PDMS macromer - 20,000 mw (20/60/20);
- dimethylaminoethyl methacrylate/isobutyl methacrylate/2-ethylhexyl methacrylate/PDMS - 20,000 mw (25/40/15/20);
- dimethylaminoethyl methacrylate/isobutyl methacrylate/PDMS - 20,000 mw (10/70/20);
- quaternized dimethylaminoethyl methacrylate/isobutyl methacrylate/PDMS - 20,000 mw (40/40/20);
- acrylic acid/methyl methacrylate/PDMS - 20,000 mw (40/40/20);
- acrylic acid/isopropyl methacrylate/PDMS - 20,000 mw (25/65/10);
- N,N-dimethylacrylamide/methoxyethyl methacrylate/PDMS - 20,000 mw (60/25/15);
- dimethylacrylamide/PDMS macromer - 20,000 mw (80/20);
- t-butylacrylate/t-butylmethacrylate/PDMS macromer - 10,000 mw (56/24/20);
- t-butylacrylate/PDMS macromer - 10,000 mw (80/20);
- t-butylacrylate/N,N-dimethylacrylamide/PDMS macromer - 10,000 mw (70/10/20);
- t-butylacrylate/acrylic acid/PDMS macromer - 10,000 mw (75/5/20);

and mixtures thereof.

49. The composition of Claim 44 wherein the active hair care component comprises a silicone conditioning agent which is selected from the group consisting of a conditioning agent comprising:

- (a) from 0.1% to 2.5% of a polydimethyl siloxane gum;
  - (b) from 0.02% to 0.7% of fumed silica; and
  - (c) from 0.4% to 18% of a volatile silicone carrier;
- a conditioning agent comprising:

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- (a) a volatile silicone fluid having a viscosity of less than about 10 centipoise;
  - (b) from 0.5% to 2.0% of a silicone gum having a viscosity of greater than about 1,000,000 centipoise;
- at ratios of volatile fluid to gum of from 85:15 to 50:50;  
and

a conditioning agent comprising:

- (a) a non-volatile silicone fluid having a viscosity of less than about 100,000 centipoise;
  - (b) from 0.5% to 2.0% of a silicone gum having a viscosity of greater than about 1,000,000 centipoise;
- at ratios of non-volatile fluid to gum of from 60:40 to 40:60.

50. A hair conditioning composition comprising:

- (a) from 80% to 99.9% of a vehicle system which comprises:
  - (A) from 0.1% to 10.0%, by weight of the hair conditioning composition, of a nonionic cellulose ether having a sufficient degree of nonionic substitution, selected from the group consisting of methyl, hydroxyethyl, and hydroxypropyl to cause it to be water-soluble and being further substituted with a long chain alkyl radical having 10 to 24 carbon atoms in an amount between about 0.2 weight percent and the amount which renders said cellulose ether less than 1% by weight soluble in water;
  - (B) from 0.02% to 10.0%, by weight of the hair conditioning composition, of a water-insoluble surfactant, having a molecular weight less than about 20,000; and
  - (C) from 65% to 99%, by weight of the hair conditioning composition, of a compatible solvent; and
- (b) from 0.1% to 20% of an active hair care component comprising:
  - (A) from 0.1% to 18%, by weight of the hair conditioning composition, of a silicone conditioning agent; and

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(B) up to about 1%, by weight of the hair conditioning composition, of a fatty alcohol;

wherein a quaternary ammonium compound comprises at least a portion of the water-insoluble surfactant at a level up to about 2.5% of the conditioning composition; and wherein said hair conditioning composition comprises no more than about 1.0% of water-soluble surfactants.

51. The composition of Claim 50 wherein the nonionic cellulose ether comprises from 0.2% to 5.0% of a hydroxyethyl cellulose substituted with a long chain alkyl radical having about 16 carbon atoms in an amount between 0.50% to 0.95%, by weight; the hydroxyethyl molar substitution is from 2.3 to 3.7; and the average molecular weight of the unsubstituted cellulose is from 300,000 to 700,000.

52. The composition of Claim 50 which comprises from 0.05% to 3.0% of the water-insoluble surfactant.

53. The composition of Claim 52 wherein the water-insoluble surfactant is selected from the group consisting of stearamide DEA, cocamide MEA, dimethyl stearamine oxide, glyceryl monooleate, sucrose stearate, PEG-2 stearamine, Ceteth-2, glycerol stearate citrate, Poloxamer 181, hydrogenated tallow dimethyl betaine, hydrogenated tallow amide DEA, and mixtures thereof.

54. The composition of Claim 53 wherein the water-insoluble surfactant comprises hydrogenated tallow amide DEA.

55. The composition of Claim 50 wherein the quaternary ammonium compound hair conditioning agent comprises from 0.5% to 2% of di(hydrogenated) tallow dimethyl ammonium chloride.

56. The composition of Claim 50 wherein the fatty alcohol is selected from the group consisting of stearyl alcohol, cetyl alcohol, myristyl alcohol, behenyl alcohol, lauryl alcohol, oleyl alcohol, and mixtures thereof.

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57. The composition of Claim 56 wherein the fatty alcohol is selected from the group consisting of cetyl alcohol, stearyl alcohol, and mixtures thereof.

58. The composition of Claim 50 additionally comprising from 0.05% to 1.0% of a chelating agent which is selected from the group consisting of ethylene diamine tetracetic acid and salts thereof, nitrilo triacetic acid and salts thereof, hydroxyethylene diamine triacetic acid and salts thereof, diethylene triamine penta-acetic acid and salts thereof, diethanol glycine and salts thereof, ethanol diglycine and salts thereof, citric acid and salts thereof, phosphoric acid and salts thereof.

59. The composition of Claim 50 wherein the silicone conditioning agent is selected from the group consisting of a volatile silicone fluid having a viscosity of less than about 10 centipoise; a non-volatile silicone fluid having a viscosity of less than about 100,000 centipoise; a silicone gum having a viscosity greater than about 1,000,000 centipoise; and mixtures thereof.

60. The composition of Claim 59 wherein the silicone gum is selected from the group consisting of polydimethylsiloxane gums and polyphenylmethylsiloxane gums.

61. The composition of Claim 50 wherein the silicone conditioning agent comprises a combination of a non-volatile silicone fluid having a viscosity of less than about 100,000 CP, and from 0.015% to 9.0% of a silicone gum having a viscosity greater than about 1,000,000 CP, at a ratio of non-volatile fluid to gum of from 70:30 to 30:70.

62. The composition of Claim 50 wherein the silicone conditioning agent comprises a combination of a volatile silicone fluid having a viscosity of less than about 10 CP, and from 0.015% to 9.0% of a silicone gum having a viscosity greater than about

1,000,000 CP. at a ratio of volatile fluid to gum of from 90:10 to 10:90.

63. The composition of Claim 50 which comprises up to about 1.0% of a trimethylsilyl-amodimethicone as at least a portion of the silicone conditioning agent.

64. The composition of Claim 50 wherein a stearamidopropyl-dimethyl amine comprises at least a portion of the water-insoluble surfactant component at a level up to about 1% of the conditioning composition.

65. The composition of Claim 50 which additionally comprises from 0.1% to 1.5% of a hydrolyzed animal protein.

66. A hair conditioning composition comprising:

(a) from 80% to 99.9% of a vehicle system which comprises:

(A) from 0.2% to 5.0%, by weight of the hair conditioning composition, of a nonionic cellulose ether substituted with a long chain alkyl radical having about 16 carbon atoms in an amount between 0.50% to 0.95%, by weight; a hydroxyethyl molar substitution of from 2.3 to 3.7; and an average molecular weight of unsubstituted cellulose of from 300,000 to 700,000;

(B) from 0.05% to 3.0%, by weight of the hair conditioning composition, of hydrogenated tallow amide DEA;

(C) from 0.05% to 0.3%, by weight of the hair conditioning composition of a chelating agent selected from the group consisting of ethylene diamine tetracetic acid, and salts thereof; citric acid, and salts thereof; and mixtures thereof; and

(D) from 65% to 99%, by weight of the hair conditioning composition, of water; and

(b) from 0.1% to 20% of an active hair care component comprising;

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- (A) from 0.5% to 15%, by weight of the hair conditioning composition, of a silicone conditioning agent which is selected from the group consisting of a combination of a volatile silicone fluid having a viscosity of less than about 10 centipoise, and from 0.5% to 2.0% of a silicone gum having a viscosity of greater than about 1,000,000 centipoise, at ratios of volatile fluid to gum of from 85:15 to 50:50; and a combination of a non-volatile silicone fluid having a viscosity of less than about 100,000 centipoise, and from 0.5% to 2.0% of a silicone gum having a viscosity of greater than about 1,000,000 centipoise, at ratios of non-volatile fluid to gum of from 60:40 to 40:60; and
- (B) from 0.5% to 2.0%, by weight of the hair conditioning composition, of dihydrogenated tallow dimethyl ammonium chloride; and
- (C) up to about 1%, by weight of the hair conditioning composition, of a fatty alcohol selected from the group consisting of cetyl alcohol, stearyl alcohol, and mixtures thereof;

wherein said hair conditioning composition comprises no more than about 0.5% of water-soluble surfactants.

67. A method for manufacturing a hair conditioning composition according to Claim 50 comprising the step of pre-mixing the silicone conditioning agent, the quaternary ammonium compound, and at least a portion of the solvent prior to mixing with the remaining components.

DATED this 3rd day of August 1990.  
THE PROCTER & GAMBLE COMPANY

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